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Journal of Intelligent & Robotic Systems
Special issue on Elderly Care Robotics – Technology and Ethics

The number of elderly people living at home is increasing, and this trend is expected to continue in the coming years. In countries like Japan, the number of elderly people is beginning to surpass the number of young people due to the low birth rate and long life expectancy. Thus, there is a need for technology, in term of software and hardware, that can support the elderly in independent living. A part of this is to help their family as well as make caregivers work effectively.

A number of mobile robot companions have been developed, providing advanced sensing, reasoning and control. However, despite the available technology seems promising, it poses several challenges when used in real scenarios that range from how to handle complex and different environments to adequately address possible ethical issues that can arise from its use. For instance, technology can easily be seen as a threat to privacy, daily interpersonal contact and citizens’ control over their own lives. It can even give rise to the elderly’s feeling being treated like an object rather than a human. Thus, it is important to address how robots and systems are going to be designed and used to avoid any negative impact and improve the elderly’s quality of life. In addition to robot control and mechanics, ambient sensing and human-robot interaction are important topics in research on elderly care technology. This special issue is organized complementary to the ICRA2018 Workshop on Elderly Care Robotics – Technology and Ethics (WELCARO) where authors of selected papers are invited to submit extended version for this special issue. Notice that papers must be extended by at least 30 % compared to the original work accepted for the workshop.

Scope and Topics
The aim of the ICRA2018 workshop is to provide a forum to disseminate and discuss recent and significant research within elderly care robotics related to both technology and ethics. We invite interested authors to submit their original and unpublished work to this workshop.

Topics of interest within the given application domain for the workshop include (but are not limited to):

- Ambient assisted living
- Ambient sensor systems
- Emotion detection
- Human-robot interaction
- Medical state classification and forecasting
- Mental disorders state classification and forecasting
- Mobile sensing
- Multi-sensor fusion
- On-body sensor systems
- Privacy in human monitoring
- Remote sensing and monitoring
- Responsible robotics
- Robot companion sensing
- Robot companion control
- Robotics ethics
- Sensitive data collection and storage
- Sensor networks
- Smart home technologies
- Social robots
- Temporal data analysis
- Time series modeling and forecasting

Manuscript submission
The manuscripts should describe the original and previously unpublished results which are currently not considered for publication in any other journal. All the manuscripts will undergo the peer review process with at least two independent reviewers selected by the guest editors. The manuscripts can be submitted by using the online submission system available at http://www.editorialmanager.com/jint/. During submission, please select in the pull-down menu ‘Choose Article Type’ that the manuscript is destined to the special issue.

Additional information
In case of any doubts related with the special issue please, contact the guest editor(s).
The website of the journal: http://www.springer.com/engineering/robotics/journal/10846

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